

Patent claims

1. Stabilizer for a motor vehicle comprising to stabilizer part (4,5) aligned parallel to ^{an} axle (2), wherein the stabilizer parts (4,5) are connected in each case on the one hand at the wheel suspension of one wheel (1) and on the other hand to the vehicle body through a bearing position (6) and wherein the two stabilizer parts (4,5) are connectable to each other through a switchable and shaped matching coupling, characterized in that

-the coupling is furnished with at least one catch (14) on the one hand and with at least one catch (17) on the other hand, wherein the two catches form at least two changeable intermediate spaces in a circumferential direction, and

- the intermediate spaces can be filled by at least two locking elements (25) shiftable to ^a limited extent for force transmission, wherein

- the locking elements (25) and the catches (14, 17) are standing in continuous positive covering in circumferential direction and are tuned such to each other that the locking elements (25) and the catches (14, 17) are geared to each other without play in the locked end position and are standing in positive covering relative to each other in the released end position and are rotatable relative to each other over a limited angle region.

2. Stabilizer according to claim 1, characterized in that the catches (14, 17) are directed radially inwardly and are disposed in a radial plane and wherein the locking elements (25) are associated with a pressure loaded locking piston (18), wherein the catches (14, 17) and the locking piston (18) are disposed on a common axis.

3. Stabilizer according to claim 2 characterized in that the side contact faces of the catches (14, 17) and the locking element (25) are formed as conical faces (26) with a smaller angle and wherein radial stops are formed at the catches (14, 17) for the locking element (25).

4. Stabilizer according to claim 3 characterized in that the radial stops are disposed at the free ends of the catches (14, 17).

5. Stabilizer according to claim 4 characterized in that conical faces (27) with a larger angle are furnished as radial stops, wherein the axial length of the conical faces (27) with a larger angle are smaller relative to the length of the conical faces (26) with a small or angle.

6. Stabilizer according to claim 5 characterized in that the conical faces (26) with the smaller angle have an angle which maintains the axial force component of a radial introduced outer force smaller than the force acting on the floor side of the locking piston (18).

7. Stabilizer according to claim 2 characterized in that the locking piston (18) is charged by a compression spring (21) in the direction of the catches (14, 17) and is impactable by a pressure medium in an opposite direction.

8. Stabilizer according to claim 7 characterized in that the compression spring is supported by a hydraulic force.

9. Stabilizer according to claims 6 ~~or 8~~ characterized in that the catches (14, 17) and the locking piston (18) are disposed in a common cylindrical casing (8), wherein the radial catch (17) is formed at the casing (8) and wherein the other catch (14) is formed at a shaft (15) supported in the casing (8) and penetrating to the outside and wherein the locking piston (18) separates the internal space of the cylindrical casing (8) into a compression spring chamber (19) and an oppositely disposed pressure chamber (20).

10. Stabilizer according to claim 9 characterized in that the floor (9) of the cylindrical casing (8) on the side of the compression spring is formed as a stroke limitation for the locking piston (18).